## WHAT IS CLAIMED IS:

A disk apparatus for reading and writing data to a storage
medium, wherein:

said disk apparatus comprises:

a storage means for storing pieces of defective track information into areas at respective addresses each corresponding to physical track number information, with each piece of the defective track information indicating existence of defective tracks in a plurality of tracks, and for storing pieces of defect information in predetermined groups, with each piece of the defect information indicating information on a defective track in said plurality of tracks; and

a processing means for receiving an instruction of read or write to a track of said storage medium, for referring to said storage means, and for performing defect processing on a defective track;

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said storage means stores pieces of pointer information for groups of said pieces of defective track information, with each piece of the pointer information indicating a start address of an storage area for each of said predetermined groups; and

when said processing means receives an instruction of read or write to a track of said storage medium, said processing means refers to a piece of said defective track information based on said addresses, and then, when existence of a defective track is indicated, refers to a piece of pointer information for a group to which said piece of the defective track information belongs, accesses the pieces of defect

- 25 information on defective tracks sequentially from a storage area
- 26 indicated by said piece of pointer information, detects defect
- information when the track as an object of said instruction is a
- 28 defective track, and performs defect processing on said defective track
- 29 based on said defect information.
  - 1 2. The disk apparatus according to Claim 1, wherein:
  - 2 said storage means stores, as said each piece of defect
- 3 information, physical track number information on said defective track,
- 4 information indicating a method of the defect processing, and a storage
- 5 capacity of said piece of defect information or an end location of a
- 6 storage area for said piece of defect information.
- 1 3. The disk apparatus according to Claim 1, wherein:
- 2 said disk apparatus further comprises a holding means for
- 3 holding a number of said plurality of tracks corresponding to one piece
- 4 of defective track information; and
- 5 said number held by said holding means is set from an outside
- 6 of the holding means.
- 1 4. The disk apparatus according to Claim 1, wherein:
- 2 said processing means accesses a storage area for said defective
- 3 track information, according to an address obtained by adding a
- 4 predetermined base address to an address corresponding to said
- 5 physical track number information.
- 1 5. A disk apparatus for reading and writing data to a storage
- 2 medium, wherein:

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| said | disk | apparatus | comprises |
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a storage means that has an area in which pieces of physical track number information on defective tracks are stored into areas at respective addresses corresponding to said pieces of physical track number information, and an area in which pieces of defect information on said defective tracks are stored; and

a processing means for receiving an instruction of read or write to a track of said storage medium, for referring to said storage means, and for performing defect processing on a defective track;

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said storage means stores said pieces of physical track number information on defective tracks and pieces of pointer information indicating addresses of areas at which pieces of defect information on said pieces of defective track are stored; and

when said processing means receives an instruction of read or write to a track of said storage medium, said processing means refers to a piece of said physical track number information on defective tracks based on said addresses, and then, when said track as an object of said instruction is a defective track, refers to a piece of said pointer information, detects a piece of the defect information at a storage area indicated by said piece of the pointer information, and performs defect processing on said defective track based on said piece of the defect information.

6. The disk apparatus according to Claim 5, wherein:

said storage means partitions a storage area into partition areas each corresponding to a plurality of tracks, and further stores pieces of identification information on said partition areas; and

| 5 | said processing means accesses each of said partition areas |
|---|---|
| 6 | each corresponding to a plurality of tracks.                |

- 7. A disk apparatus for reading and writing data to a storage medium, wherein:
- 3 said disk apparatus comprises:
- a storage means for storing pieces of physical track number information on defective tracks and pieces of defect information on said defective tracks into areas at respective addresses corresponding to said pieces of physical track number information; and
  - a processing means for receiving an instruction of read or write to a track of said storage medium, for referring to said storage means, and for performing defect processing on a defective track;
- 11 and

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- when said processing means receives an instruction of read or write to a track of said storage means, said processing means refers to a piece of said physical track number information on defective tracks based on said addresses to detect a piece of the defect information, and then, when said track as an object of said instruction is a defective track, performs defect processing on said defective track based on said piece of the defect information.
  - 1 8. The disk apparatus according to Claim 7, wherein:
  - said storage means stores a volume of each piece of said defect information, before and after said each piece of the defect information; and
  - 5 said processing means sequentially accesses said pieces of 6 defect information forward and backward.

- 1 9. The disk apparatus according to Claim 1, wherein:
- 2 said defect processing performs at least either of skipping
- 3 processing, in which a defective sector is replaced by a normal sector,
- 4 and slipping processing, in which a defective sector is replaced by a
- 5 normal sector that physically follows said defective sector.
- 1 10. The disk apparatus according to Claim 5, wherein:
- 2 said defect processing performs at least either of skipping
- 3 processing, in which a defective sector is replaced by a normal sector,
- 4 and slipping processing, in which a defective sector is replaced by a
- 5 normal sector that physically follows said defective sector.
- 1 11. The disk apparatus according to Claim 7, wherein:
- 2 said defect processing performs at least either of skipping
- 3 processing, in which a defective sector is replaced by a normal sector,
- 4 and slipping processing, in which a defective sector is replaced by a
- 5 normal sector that physically follows said defective sector.